In the Claims

Please cancel claims 29, 49, 52-56 and 59-61.

Please amend the following claims:

Claim 28 (five times amended):

F1

28. A method of using a target binding assembly (TBA) wherein said TBA comprises a plurality of nucleic acid recognitions units wherein each of said nucleic acid recognition units binds to a specific nucleic acid sequence on a target double stranded nucleic acid molecule; and wherein the combined binding affinity of said plurality of nucleic acid recognition units is such that said TBA specifically binds to the target double stranded nucleic acid molecule but does not bind to non-target molecules; and wherein said method comprises administering to a patient a therapeutically or prophylactically effective amount of said TBA, or nucleic acid which codes for and produces said TBA, such that the TBA binds a target double stranded nucleic acid molecule to achieve a desired prophylactic or therapeutic result; and wherein said TBA is selected from the group consisting of SEQ ID NO. 109, SEQ ID NO. 110, SEQ ID NO. 111, SEQ ID NO. 112, SEQ ID NO. 113, SEQ ID NO. 114, SEQ ID NO. 115, and SEQ ID NO. 116, and the patient is infected with HIV or HPV.

Claim 57 (amended):

F2

57. The method, according to claim 62, wherein one of said nucleic acid recognition units comprises a DNA-binding portion of NF-kB.

Please add the following new claims:

F3

62. A method of using a target binding assembly (TBA) wherein said TBA comprises a plurality of nucleic acid recognitions units wherein each of said nucleic acid recognition units binds to a specific nucleic acid sequence on a target double stranded nucleic acid molecule; and wherein the combined binding affinity of said plurality of nucleic acid recognition units is such that said TBA

specifically binds to the target double stranded nucleic acid molecule but does not bind to non-target molecules; and wherein said method comprises administering to a patient a therapeutically or prophylactically effective amount of said TBA, or nucleic acid which codes for and produces said TBA, such that the TBA binds a target double stranded nucleic acid molecule to achieve a desired prophylactic or therapeutic result; and wherein said nucleic acid recognition units are selected from the group consisting of sequences derived from the DNA-binding portions of NF-kB, NF-IL6, NF-AT, rel, TBP, the papilloma virus' E2 protein, sp1, inactive restriction enzymes, antibodies, and the repressors cro and CI from bacteriophage lambda.

63. A method of using a target binding assembly (TBA) wherein said TBA comprises a plurality of nucleic acid recognitions units wherein each of said nucleic acid recognition units binds to a specific nucleic acid sequence on a target double stranded nucleic acid molecule; and wherein the combined binding affinity of said plurality of nucleic acid recognition units is such that said TBA specifically binds to the target double stranded nucleic acid molecule but does not bind to non-target molecules; and wherein said method comprises administering to a patient a therapeutically or prophylactically effective amount of said TBA, or nucleic acid which codes for and produces said TBA, such that the TBA binds a target double stranded nucleic acid molecule to achieve a desired prophylactic or therapeutic result; and wherein at least one of said nucleic acid recognition units has been modified such that the binding affinity of the modified unit is less than the binding affinity of the unmodified unit.

64. A method of using a target binding assembly (TBA) wherein said TBA has been designed to comprise a plurality of nucleic acid recognition units wherein each of said nucleic acid recognition units binds to a specific individual target nucleic acid sequence on a target double stranded nucleic acid molecule; and wherein said target double stranded nucleic acid molecule comprises a plurality of said specific individual target nucleic acid sequences in a specific order and at specific locations within said target double stranded nucleic acid molecule; and wherein the combined binding affinity of said plurality of nucleic acid recognition units, when each of said nucleic acid units is bound to its specific individual target nucleic acid sequence, is such that said

P3

TBA specifically binds to the target double stranded nucleic acid molecule but does not bind to non-target molecules; and wherein said method comprises administering to a patient a therapeutically or prophylactically effective amount of said TBA, or nucleic acid which codes for and produces said TBA, such that the TBA binds a target double stranded nucleic acid molecule to achieve a desired prophylactic or therapeutic result; and wherein said nucleic acid recognition units of said TBA bind to their specific individual target sequences, and function cooperatively, such that there is sufficient affinity for binding to occur between said TBA and a double stranded nucleic acid molecule only if all of the specific individual target nucleic acid sequences are present, and in the order and location corresponding to said target double stranded nucleic acid molecule.

65. A method of using a target binding assembly (TBA) wherein said TBA comprises a plurality of nucleic acid recognition units assembled by assembly sequences that are not ligated together, wherein each of said nucleic acid recognition units binds to a specific nucleic acid sequence on a target double stranded nucleic acid molecule; and wherein the combined affinity of said plurality of nucleic acid recognition units is such that said TBA specifically binds to the target double stranded nucleic acid molecule but does not bind to non-target molecules; and wherein said method comprises administering to a patient a therapeutically or prophylactically effective amount of said TBA, or nucleic acid which codes for and produces said TBA, such that the TBA binds a target double stranded nucleic acid molecule to achieve a desired prophylactic or therapeutic result.

P3